



PATIENT PRESENTING CLINICAL SIGNS

Luna Fleron

History: Luna was noted to have an arrhythmia in October. She is doing relatively well at home but tends to vomit and the family is having some trouble keeping weight on her. Some improvement noted after a diet change. On exam: pronounced arrhythmia, no obvious murmurs noted, PSS, lung fields clear, compressible thorax, mm pink moist, CRT<2. BP: 120mmHg. *No sedated for study.

SPECIES

Feline

BREED

DSH

SEX

Female Spayed

AGE

10 years

WEIGHT

9.69lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

27231

DATE

11/2/22

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 50mm/mV. The average heart rate is 250bpm (range 176-300bpm). No identifiable P waves with an irregularly irregular rhythm, consistent with atrial fibrillation. The QRS is prolonged, consistent with a bundle branch block.

ECG diagnosis: Atrial fibrillation with a bundle branch block.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is mildly increased with significant myocardial dysfunction. The LV wall thicknesses are irregular with overall thinning. There is a diffusely hyperechoic endocardium consistent with fibrosis. The endocardium is significantly remodeled. The papillary muscles are mildly remodeled and hyperechoic.

Left atrium: The left atrium is severely dilated and bulbous in appearance. Subtle smoke suspected (see below). No obvious thrombi seen.

Mitral valve: The mitral valve is normal in structure and mobility. No obvious systolic anterior motion is seen. Mild central MR secondary to annular stretch.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

Right ventricle: The RV is affected as well with diffuse fibrosis overall.

Right atrium: The right atrium is moderate to severely dilated.

Tricuspid valve: The tricuspid valve appears normal with mild tricuspid regurgitation. Normal velocity.

Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	2.2
LA:Ao (Swe)	2.2
IVS thickness (cm)	0.35
LVID diastole (cm)	1.9
PW thickness (cm)	0.35
LVID systole (cm)	1.4
FS (%)	26

Doppler Measurements

PV Vmax (m/s)	0.8
AoV Vmax (m/s)	1.0
MR Vmax (m/s)	NA
TR Vmax (m/s)	1.9
TR PG (mmHg)	15

INTERPRETATION OF THE FINDINGS

The finding of biatrial dilation with thinning of the ventricular walls with dysfunction is most consistent with Restrictive Cardiomyopathy (RCM); however, DCM or burn-out/end-stage HCM can also have this appearance. Regardless of categorical



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classification, severe biatrial dilation is present in addition to LA smoke which dramatically raises the risk of a blood clot event. No effusions or other issues are identified.

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The ECG confirms the ausculted arrhythmia, which is most consistent with atrial fibrillation with a bundle branch block. While the bundle branch block is benign, this will cause QRS morphology to be wide and can impede interpretation. A six lead tracing would be ideal to confirm. Atrial fibrillation has developed secondary to marked atrial dilation and remodeling and will persist life-long. Our goal with this arrhythmia is to maximize cardiac output by maintaining a heart rate between 140-160bpm. What is seen here does warrant therapy, with rates as high as 300bpm.

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Given the totality of the findings, full cardiac support is recommended as below even without reported clinical signs. The patient is at high risk for malignant arrhythmias, fulminant congestive heart failure and/or sudden death going forward, and this should be expressed to the owner. Our goal is to stabilize the situation for the short-term; however, prognosis is poor going forward.

AGE

10 years

RECOMMENDATIONS

- Institute Lasix/furosemide 1-2mg/kg PO q12h.
- Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges).
- Institute Pimobendan (off label use) 1.25mg PO q12h.
- Institute Diltiazem 7.5mg PO q12h. Reassess heart rate in 1-2 weeks and increase to TID if necessary.
- Elective anesthesia is not advised.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc.).

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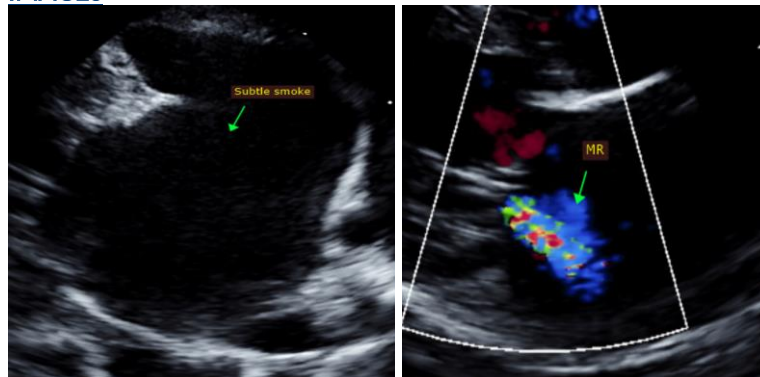
PLAN

- Recheck renal panel and BP in 1-2 weeks to ensure tolerance of medications, then every 3-4 months lifelong.
- Recommend recheck echocardiogram in 6 months, sooner if clinical signs arise in the interim.

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

IMAGES



HOSPITAL NAME

Mass Veterinary Services

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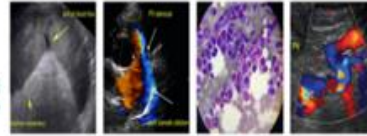
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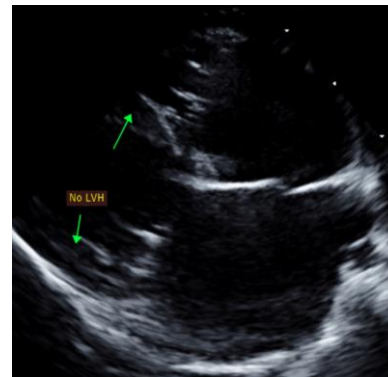
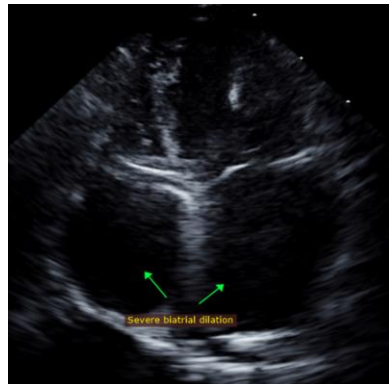
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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